



The Stryker-Equipped Cavalry Squadron in an Urban Environment

by Sergeant First Class Andrew L. Barteky

Fifteen city blocks away, a column of nine light commercial trucks dash along a city street at high speed. Each truck carries approximately six paramilitary troops, armed with AK-47s and rocket propelled grenades (RPGs). They comprise, in effect, a suicide squad intent on attacking the lead company of a Stryker Brigade Combat Team (SBCT) battalion on an area security mission in an urban area. In the command post for Delta Troop of the cavalry squadron (RSTA), the console operator observing the real-time video screen sees the column and modifies the tactical unmanned aerial vehicle's (TUAV's) flight pattern slightly to keep the force in camera view. He notifies the battle captain in the squadron tactical operations center (TOC) nearby, but the battle captain has been monitoring the remote viewing terminal inside the TOC and has already seen what the console operator sees. After a lightning-quick staff huddles with the S2 and the fire and effects control center, the battle captain has notified the squadron commander, S3, and brigade headquarters by FM radio, high-frequency radio, or Force XXI Battle Command Brigade and Below (FBCB2). He begins to coordinate indirect fire and reconnaissance handover to ground recon troops and/or infantry scouts in the line of the enemy's march.

Thus, the cavalry contributes information, turned into actionable intelligence, which initiates maneuver in the form of a blocking effort, an ambush, or a counterattack, as the SBCT commander may designate. The SBCT — designed, developed, and fielded as a transition force between the current force and the future combat systems — will fight and win in an urban operational environment, and it will do so because it will see first, understand first, act first, and finish decisively. The force that enables the majority of the SBCT's ability to see first is the cavalry squadron (reconnaissance, surveillance and target acquisition [RSTA]).

This article examines which characteristics of the Stryker-equipped cavalry squadron (RSTA) enable it to effectively support the SBCT in an urban fight.

Cavalry in Urban Operations — How It Used to Be

Dozens of books have been written on the history of cavalry and its role in warfare. We will not attempt to reproduce those works in this brief article, so suffice it to say, that cavalry has traditionally conducted reconnaissance, surveillance, and econ-



omy of force operations. Whether the cavalry of the past fought for information or relied primarily on stealth and observation depended on the nature of a particular cavalry organization.

Heavy, armored cavalry had the punch and firepower to attack, defend, and develop a situation, and extract information using fire and maneuver. Other cavalry units, particularly during the first part of World War II (WWII), operated out of armored cars, or similar vehicles, and relied primarily on stealth and observation. But the nature of combat taught us some lessons. Major General R.W. Grow, commander of the 6th Armored Division during WWII, wrote, "Too often, our pre-World War II training directives emphasized the 'sneak and peek' method of reconnaissance. Fortunately, farsighted cavalry officers who believed that 'the mission of Cavalry is to fight' and that worthwhile information can only be gained by fighting, influenced the development of reconnaissance squadrons.¹

Lessons learned in the early campaigns of WWII, primarily in Africa, led the Army Ground Force (AGF) to reorganize the mechanized cavalry in 1943 to give the squadron and troop the ability to fight for information. Combat in northwest Europe re-

quired cavalry reconnaissance units to perform the traditional roles of horse cavalry — defend, delay, exploit, and attack, as well as reconnaissance — reinforcing early findings that reconnaissance required fighting.²

Legendary World War II cavalryman, Colonel "Hap" Haszard, echoed similar thoughts during an informal reconnaissance discussion at the National Training Center, Fort Irwin, California, with a group of observer controllers in 1988. Haszard stated that cavalry and scouts would always face situations requiring them to "fight for information." He then went on to qualify his remarks by explaining that the quality of the information gained by scouts and cavalry was "inversely proportional to the distance between the soldier's (rear end) and the ground," and "dismounted techniques must be considered essential to successful reconnaissance."

These observations can be said to apply equally to urban and countryside fighting. Yes, there are many times that scouts will fight for information in urban areas. Sometimes it is very important to know if the enemy runs when fired on, which direction he runs, and to whom he runs! And certainly a scout's surviv-

ability against small arms and RPGs is a matter of vital importance to his ability to collect information. But how the Army fights and the suite of tools used to conduct RSTA has changed since WWII. Colonel Haszard was correct when he ascertained that ultimately the scout on the ground is the deciding factor for answering the SBCT commander's combat critical information requirements (CCIR). But that scout is not alone, and in the cavalry squadron (RSTA), his abilities are magnified and his reach expanded by a host of assets.

Changes in Contact Continuum and the Operational Environment

While an infantry battalion entering a city during WWII, the Korean War, or the Vietnam War generally had some intelligence from ground scouts or air reconnaissance to guide them, frequently the maneuver turned into a movement-to-contact. With the advent of long-range acquisition systems, the improvement of sensor, the addition of echelons-above-brigade collection assets, and the use of TUAVs, the Army sought a change in the contact continuum.

In the past, an infantry battalion might enter a city with minimal intelligence information, gained almost exclusively through ground reconnaissance. Either the lead company or battalion scouts would "find" the enemy via firefight contact and deploy while in contact to develop the situation.

New doctrine defines information as an element of combat power. Today's forces seek to see the enemy first, which means before they are fired on. This may be a ground scout using a long-range, advanced scout surveillance system (LRAS3), but in today's Army, it may also take the form of a Prophet team conducting a tactical communications intercept and direction-finding to the enemy's command post. The SBCT commander in an urban environment (or any other for that matter) might use his TUAV to look deep and see the enemy well in advance of the lead infantry element operating in the restricted line of sight of the city. Because he can see first, the SBCT commander can have his cavalry squadron, his brigade S2, and his military intelligence company (organic), turn that information into action-

able intelligence. With that intelligence, the SBCT commander can now understand first.

Using the scenario at the beginning of this article, the commander realizes that his lead company, busy clearing buildings near the town hall, will be exposed to an imminent suicide attack. He has scouts on the ground and in buildings two, three, perhaps four, blocks away from the infantry, but the image on the TUAV and the rapid analysis of that information allows him to understand that those ground scouts cannot see the coming attack until it is too late to stop it, nor can the few scouts in position to engage mass enough firepower to block the attack, even if they see it coming. Because he understands first, the SBCT commander can now act first and maneuver *out of contact* to a decisive point on the urban battlefield.³

See first — timely and correct situational awareness.

Understand first — information analyzed into intelligence to create situational understanding.

Act first — maneuvering forces while out of contact.

Finish decisively — defeating the attack on the precise ground and at time of our choosing.

Since the commander has maneuvered out of contact, his forces are now poised to finish decisively and destroy the enemy suicide attackers.

The world situation has significantly changed during the past 20 years, and the operational environment reflects the likelihood that the SBCT will be fighting more frequently in urban areas, and fighting a dispersed, nontraditional enemy in a noncontiguous environment. Linear warfare has not disappeared and large major theater of war engagements will still occur. But it is the small-scale contingency, the urban conflict, the isolated pockets of resistance housed in apartment complexes and city parks that



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the SBCT will likely encounter. Technology will never replace ground scouts, but seeing first with technological capabilities can help the cavalry squadron (RSTA) better protect ground scouts and apply them to critical points on the urban battlefield to gain relevant information.

The TUAV provides real-time imagery along a planned and designated flight path over named areas of interest that answer the brigade commanders CCIR. In cities, the TUAV is excellent for observing rooftops, movement into and out of the city's perimeter, or gauging the size and direction of movement of large groups of people such as demonstrators or mobs. But a city still offers many places the enemy can hide, and because of high-rise structures, the TUAV cannot effectively observe.

The Prophet offers a signal-intercept and direction-finding capability and can often provide a line of bearing, or when employed as a two- or three-vehicle team, a cross-fix on the location of enemy transmitters. This information is frequently perishable, almost fleeting, and sometimes difficult to separate from the total communications traffic within an urban area. However, if frequencies are known, such as cellular phones, and the target bandwidth is narrowed, the Prophet has the capability to augment a developing intelligence picture of a given urban area.

One of the most important tools that the SBCT commander has to gather information and help make decisions in an urban fight are embedded human intelligence collectors, all the way down to the squad level in cavalry squadron (RSTA) platoons. These 97Bs are trained in tactical questioning and, depending on the intensity of the anticipated conflict, may be very valuable in identifying potential ambushes, impending demonstrations, critical government and religious sites to avoid, and other population and infrastructure-related information. Their contribution might be something as simple, yet as important, as gathering from a local citizen that the bridge the SBCT plans on using for its main attack has been mined. The human intelligence (HUMINT) information travels up its chain of communication to the SBCT's HUMINT officer, unless of course, the information is time-sensitive or units are in impending peril. In that case, a report would go directly to the threatened force.

The Stryker (Reconnaissance Variant) in the Urban Fight

Brigadier General John Hunt Morgan used horses to rapidly maneuver his infantry to decisive points on the battlefield. But

when entering a town, he dismounted and fought as infantry. In modern warfare, the Stryker vehicle (infantry carrier vehicle) is the infantryman's mount. It may eat petroleum products instead of hay, but make no mistake, it is still fundamentally a *mount*. Yes, there may be times that infantry will remain buttoned up in their Strykers when moving through an urban area, and they may even employ the remote weapons station (RWS) from which to fight. The Infantry School has developed, and will continue to develop, techniques, tactics, and procedures that govern infantry remaining mounted or dismounting in an urban fight. Our purpose here is to discuss how the Stryker vehicle can enable the scouts of the cavalry squadron (RSTA) to conduct reconnaissance that enables the infantry to fight effectively in an urban area.

The Stryker vehicle (reconnaissance variant) brings several characteristics to the table that will make the scout's life better during an urban fight.⁴ First, the Stryker offers protection from small-arms munitions without the addition of bolt-on antitank-guided missile armor. What this means for scouts conducting reconnaissance of a suburb that will serve as the lead battalion's foothold, is that the crew can likely survive small-arms fire if



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ambushed — small-arms fire that would have either killed or rendered ineffective a scout team in a high-mobility, multipurpose wheeled vehicle. Additional bolt-on armor can enhance the Stryker's protection by defeating RPG strikes, but there exists a trade-off in time to apply the armor, as well as vehicle maneuverability and transportability by airframe. Unlike the infantry variant, the reconnaissance variant of the Stryker mounts an LRAS3 in place of the RWS. Avoiding decisive engagement (as is the cavalry's mantra), that scout team might return fire, if attacked, by using its MK-19 to suppress the enemy while the team moves to a position of safety; but design-wise, the vehicle has traded the RWS for the LRAS3. But the effective use of the suite of electronic collection tools should minimize those circumstances.

FBCB2 mounted inside the Stryker helps the crew maintain situational awareness and their presence is populated on the squadron common operational picture within the TOC, thus enabling effective command and control. In the confined space of an urban area, with many dismounts operating in and around vehicles, fratricide prevention is a key concern. The Stryker has an external communications system that will allow dismounted scouts, or infantry operating in conjunction with recce platoons, to communicate with the Stryker's intercom system. This becomes particularly important in controlling fires, from the Strykers, as well as from a mobile gun system (MGS) that might have been pushed forward in support. The dangers of collateral damage to infantry from main gun barrel blast are well documented and still remain a training and execution concern. While FBCB2 enables good situational awareness for vehicles, it does not, at present, track dismounted soldiers.

The 1st Squadron, 14th Cavalry, the Army's first cavalry squadron (RSTA), discovered during training that an enhanced position locating and reporting system and FBCB2 operation was generally the most reliable form of communication when operating in an urban area. FM communications via all-source imagery processors are often spotty and sometimes unreliable, since properties, such as power, distance, and line-of-sight, while hold-



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ing true in 70 to 80 percent of situations, sometimes precipitated temporary communications outages at distances as short as 200 to 300 meters.⁵ Still, as noted during the recent war in Iraq, FM communications can be used to rapidly and efficiently vector dismounted infantry, MGS, or tanks in fire support to attack a given target. This will often be controlled much like a ground controller might maneuver aircraft to a target. Major Ben Watson makes an observation about tanks in support of infantry during the recent war in Iraq: "As long as the supported unit can talk directly to the tanks [or Strykers, or MGS], it is fabulous. We blocked, numbered, and phase-lined the entire city [Umm Qasr], and that system worked as well. Often, I could hear guys coordinating tank fires by saying, 'they are in building A3.' We have also just told them things like 'do you see the 2-story house with the rusty roof? The bunkers are at the base of the white house to the east of that one.'"⁶

The LRAS3 mounted on the reconnaissance variant is a tremendous "see first" tool, but its value becomes attenuated when employed in an urban environment. The LRAS3 is excellent for seeing enemy troop formations in broad, sweeping terrain such as the desert. But when employed in dense undergrowth, and as in the case of urban areas, the crew will have to be very creative to get the kind of observation "shots" needed to make the LRAS3 effective.

The squadron has 120mm mortars that can be employed in an urban fight. Adding 60mm mortars to the recce troops (a modification currently under consideration) would simply increase the squadron's tools. Often, in an urban fight, the 120mm creates too much damage and is sometimes less effective due to its increased minimum range and minimum safe distance. The 60mm is more portable, can be employed directly with the scout teams, and can deliver a higher volume of fire.⁷

Javelin antitank weapons in the hands of recce platoons provide an effective response to enemy armored vehicles, medium-to-heavy trucks, and in some cases, can be employed to excellent effect against bunkers and buildings.

The cavalry squadron (RSTA) has the equipment, manpower mix, and capability to effectively conduct reconnaissance in urban terrain. But like any intelligence, surveillance, and reconnaissance (ISR) mission, good planning and execution must be based on sound principles. These principles apply not only to ISR operations in support of the SBCT, but also to urban reconnaissance missions in general.

Planning ISR operations in urban terrain includes:

- Conducting urban intelligence preparation of the battlefield.
- Using the "reach" of all collection assets.
- Developing a HUMINT collection plan.
- Developing a HUMINT collection matrix.
- Determining ISR objectives.
- Refining an effects plan (both lethal and nonlethal).
- Communicating the plan.
- Detailing the rules of engagement.
- Planning infiltration and exfiltration lanes.
- Preparing a medical evacuation and logistics resupply plan.
- Synchronizing aerial and ground reconnaissance.

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Executing ISR operations in urban terrain includes:

- Approaching the urban area.
- Isolating/reconnoitering the area.
- Entering the area by overt patrol or infiltration.
- Conducting reconnaissance patrols.
- Collecting combat information.
- Spotting and assessing HUMINT contacts or sources.
- Occupying urban surveillance sites and operations.
- Reporting information.
- Employing effects.
- Conducting battle, target, or reconnaissance handover.
- Exploiting contacts or sources.
- Assisting in isolation.⁸

This article represents how the SBCT's primary reconnaissance capability will likely be employed in an urban environment. The first SBCT and cavalry squadron (RSTA) underwent an operational evaluation in May 2003 at the Joint Readiness Training Center. Pending Congressional approval of that evaluation, the first SBCT and its cavalry squadron (RSTA) will be subject to deployment and a real-world mission. And though we may not currently have a perfect picture as to how these units will best be organized, equipped or employed, the lessons learned and conclusions drawn will form the doctrine and training of future squadrons.



Notes

¹Major General R.W. Grow, "Operation of Cavalry Recon Squadron Integral to the Armored Division," A Research Report, The Armored School, Fort Knox, Kentucky, 1949-1950, Foreword.

²Louis A. DiMarco, "The U.S. Army's Mechanized Cavalry Doctrine in WWII," Thesis, Master of Military Art and Science, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas.

³How scouts track locations, both enemy and friendly, in an urban area must be synchronized with how maneuver units track maneuver forces, and the traditional pattern of phase lines and checkpoints may not be sufficient in a dense urban area.

⁴One of the most attractive aspects of the SBCT is that virtually 90 percent of its vehicles are all built on a single chassis, six-wheeled, 18-ton interim armored vehicle. A variant of this basic chassis exists for various components of the SBCT, such as the reconnaissance variant for the scout, the command variation for leaders, the fire support variant, and the engineer variant.

⁵Major Michael Kasales, "Collected Squadron AAR Comments from Urban Reconnaissance FTX, SCLA," Headquarters, 1st Squadron, 14th Cavalry, 3d Brigade, 2d Infantry Division, Fort Lewis, Washington, 5 December 2002.

⁶Major Ben T. Watson, email to various recipients, including Directorate of Training, Doctrine, and Combat Development, Fort Knox, Kentucky, from a Marine Expeditionary Unit operating inside Iraq, 14 April 2003.

⁷Kasales, 25.

⁸Ibid., 3.

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